

FIG. 1

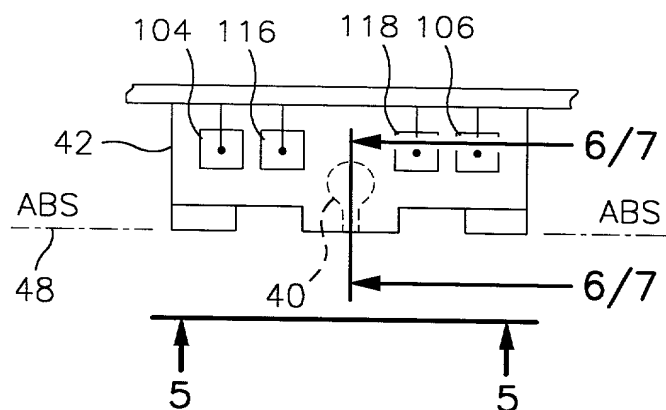


FIG. 2

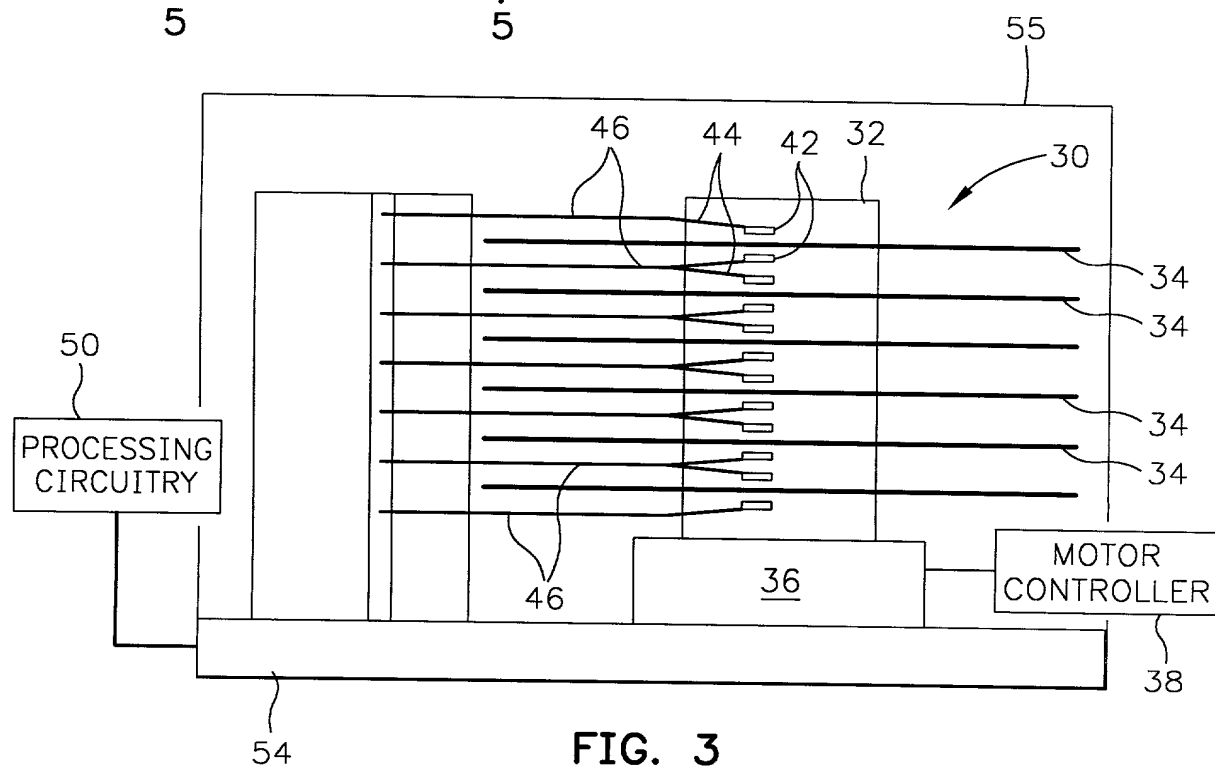


FIG. 3

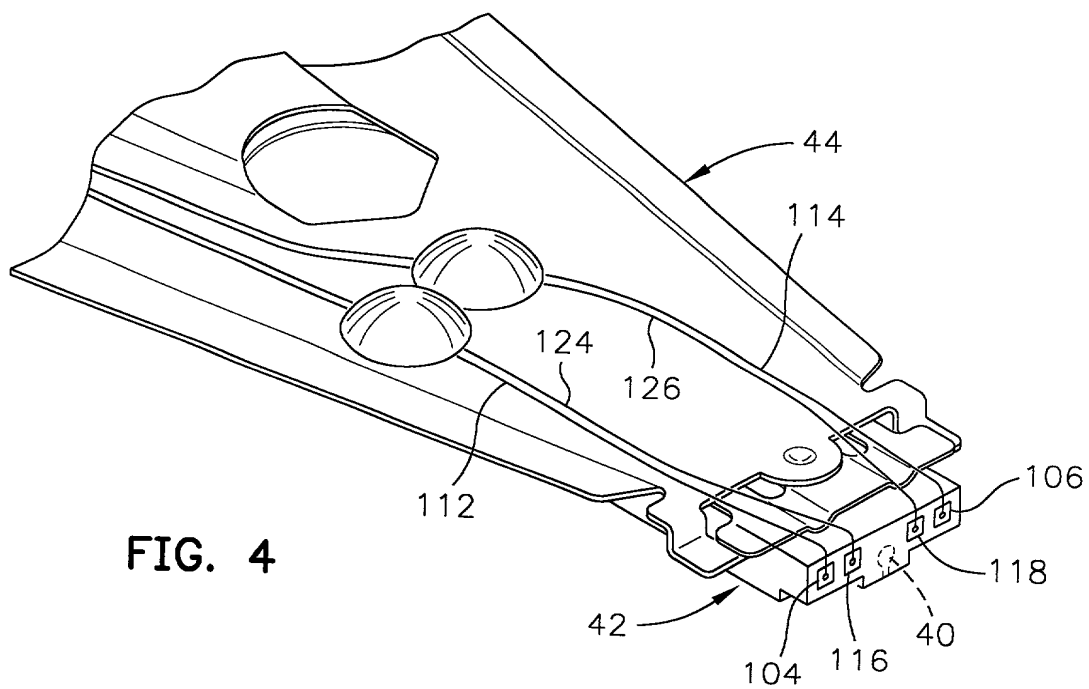


FIG. 4

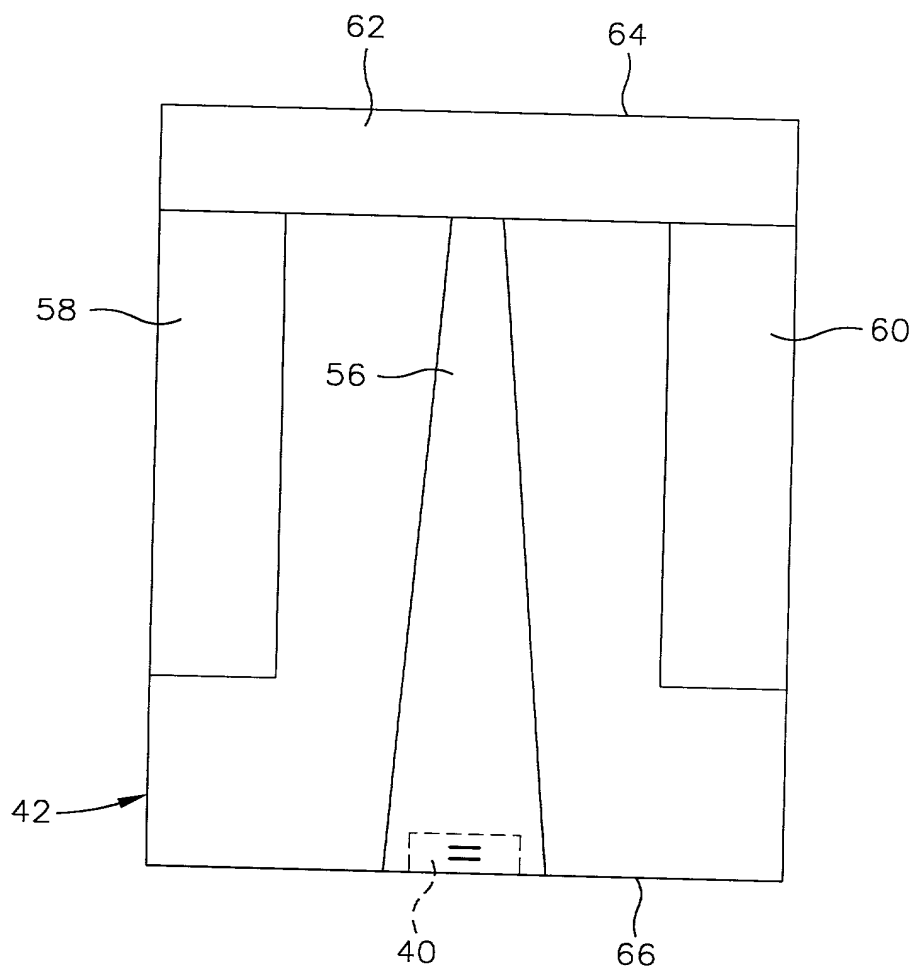
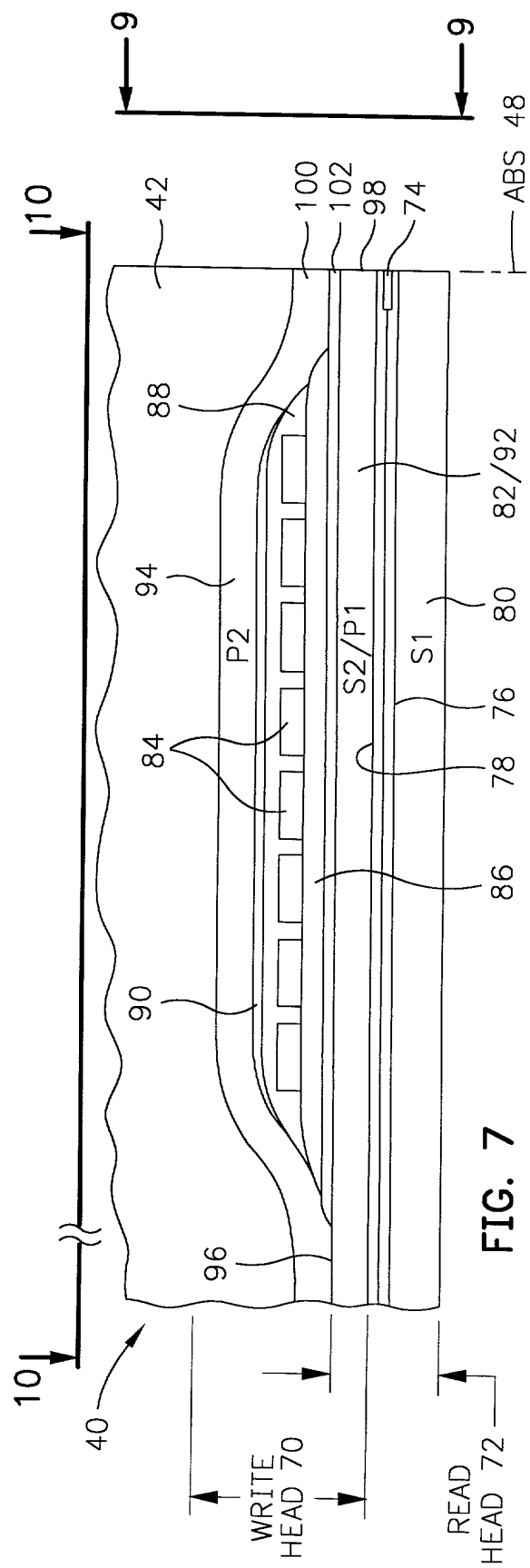
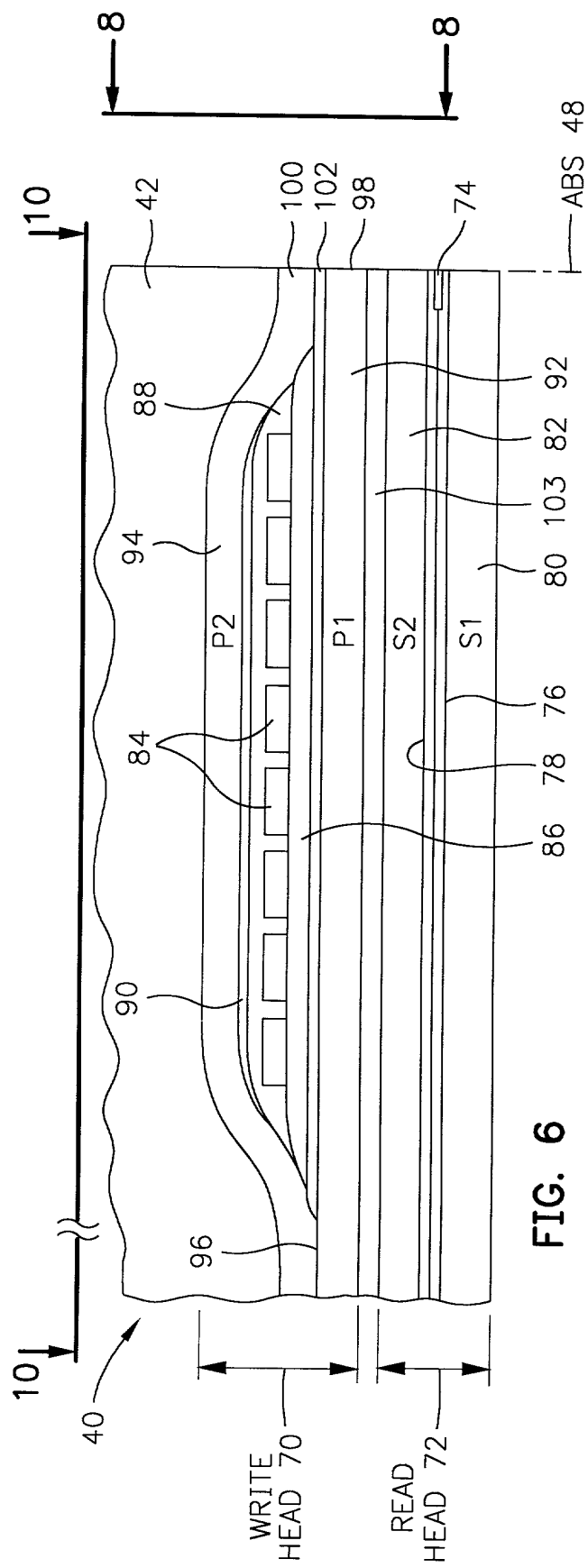


FIG. 5



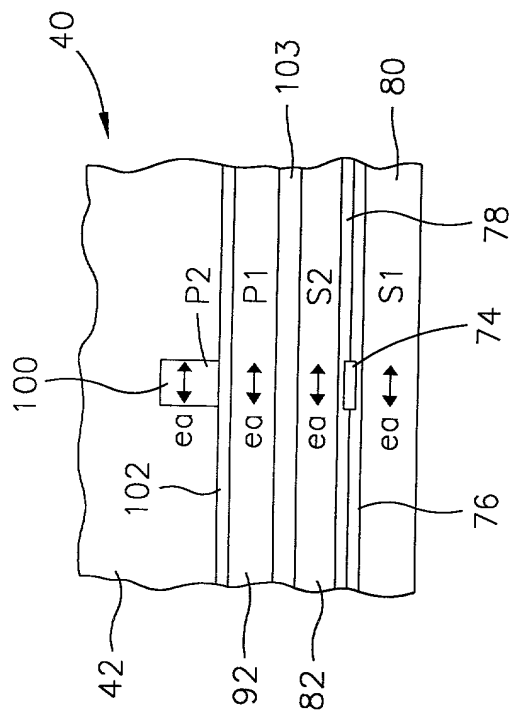


FIG. 8

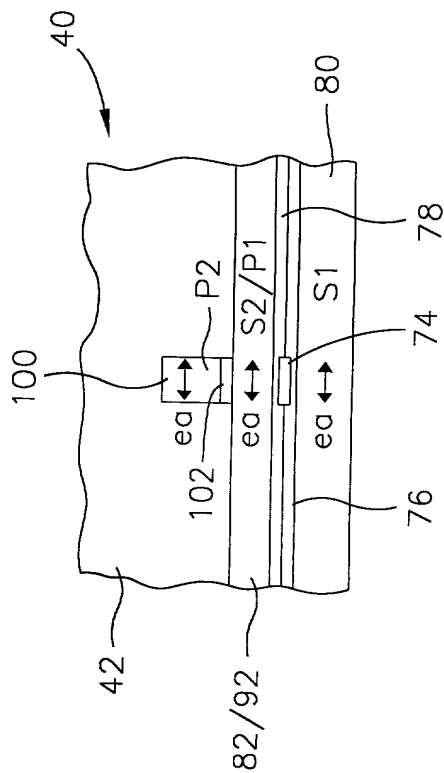


FIG. 9

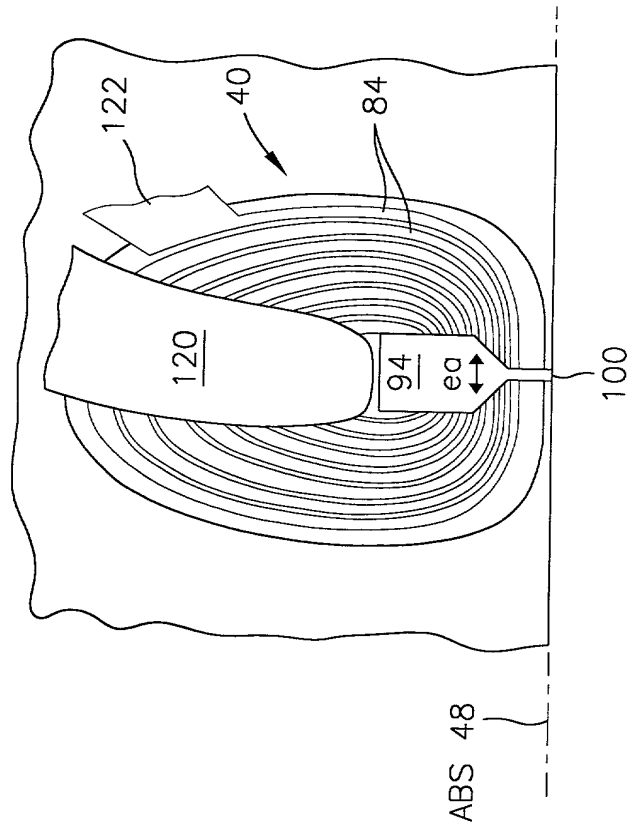


FIG. 10

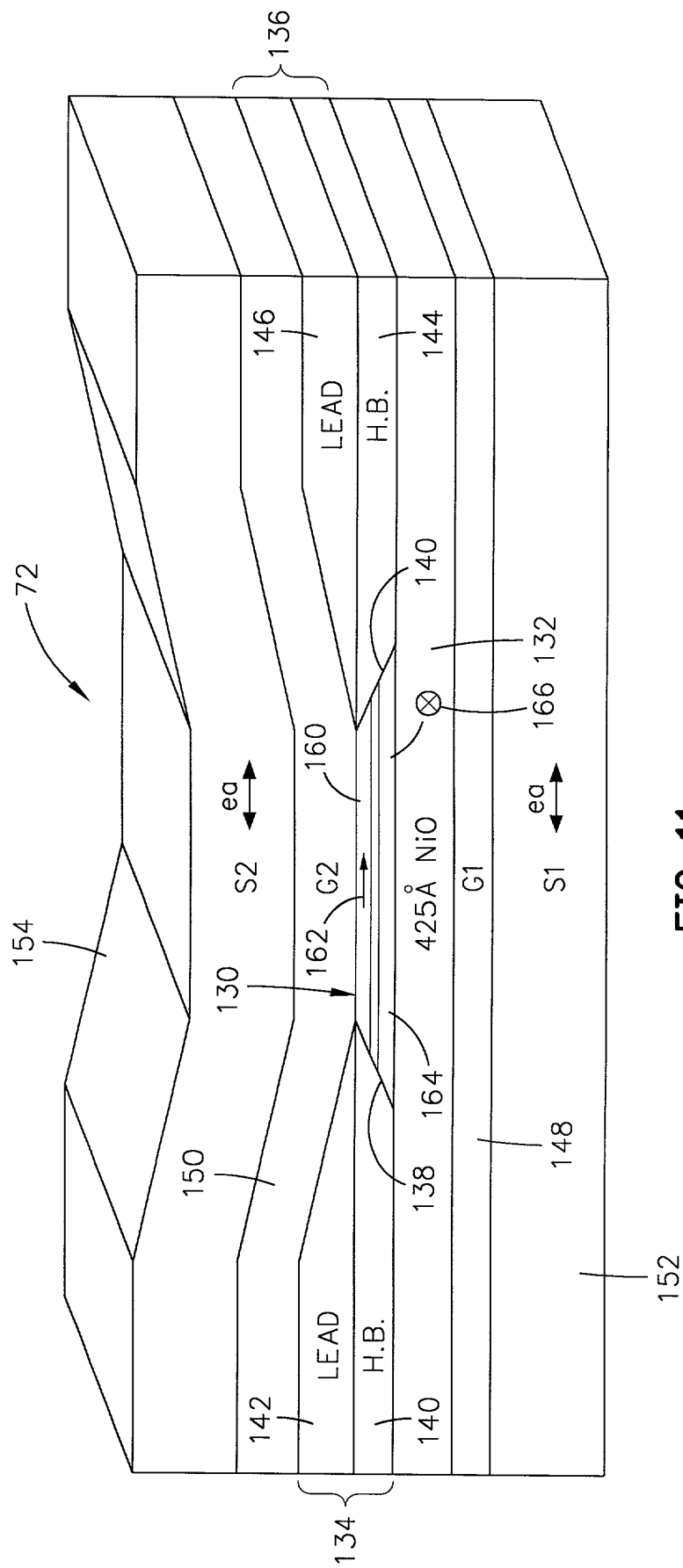


FIG. 11  
(ABS)

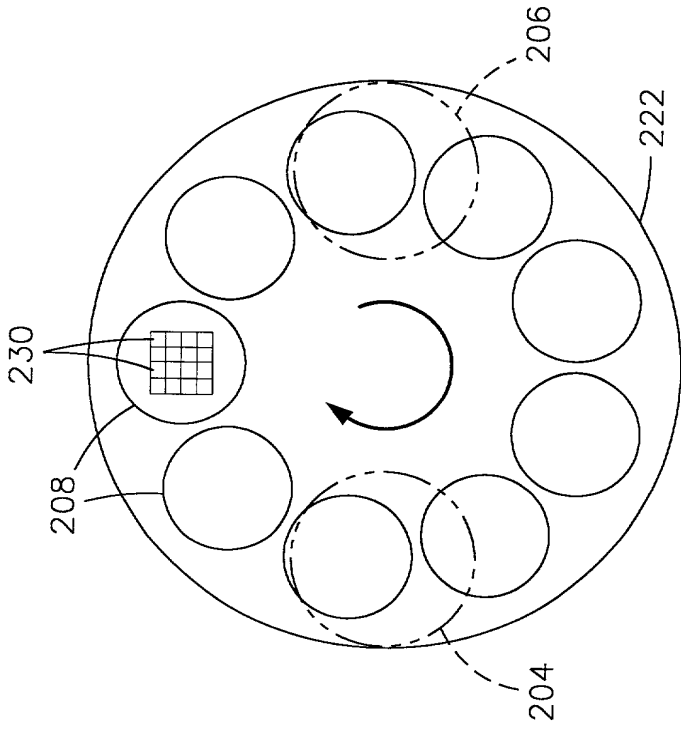


FIG. 13

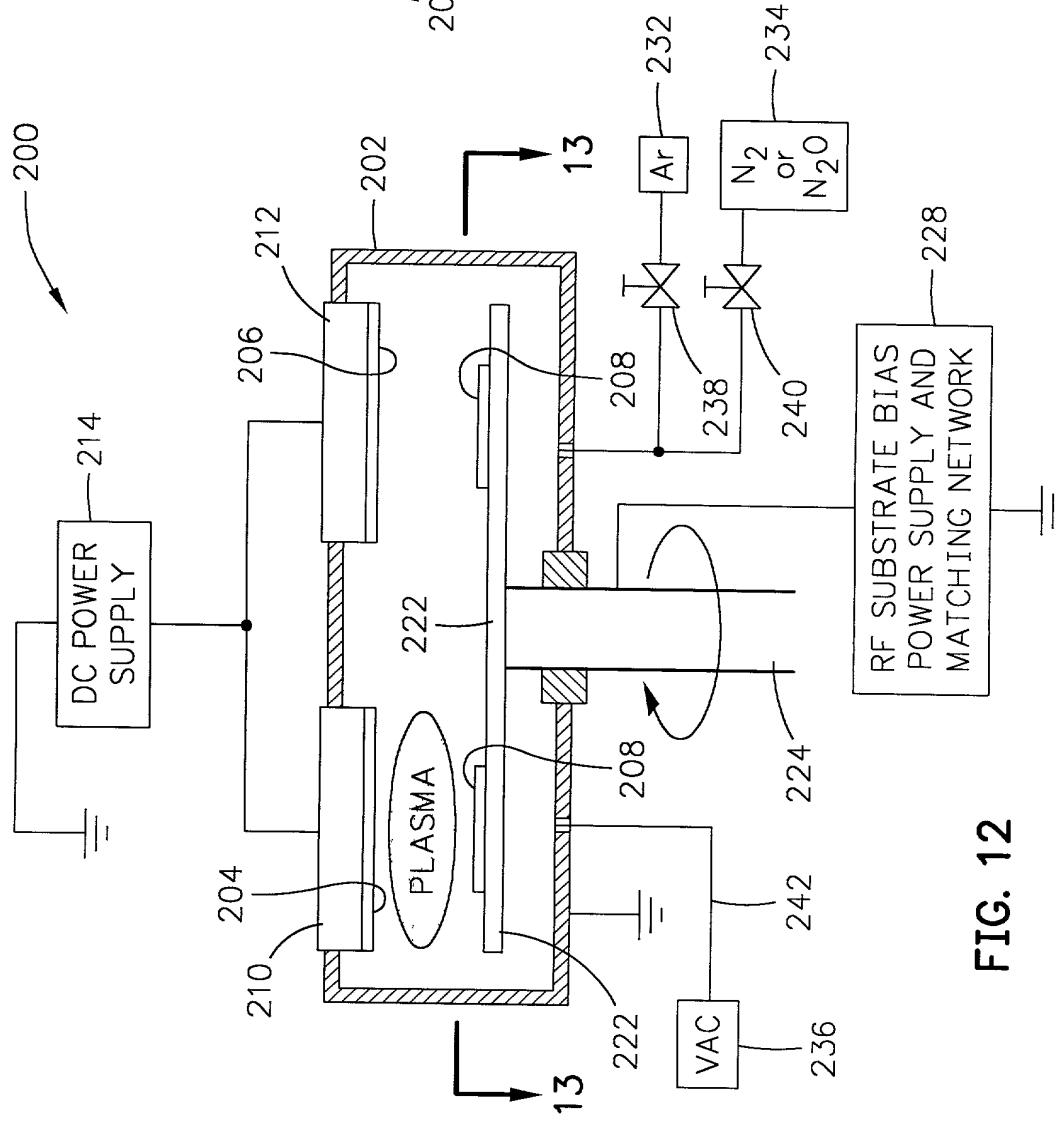


FIG. 12

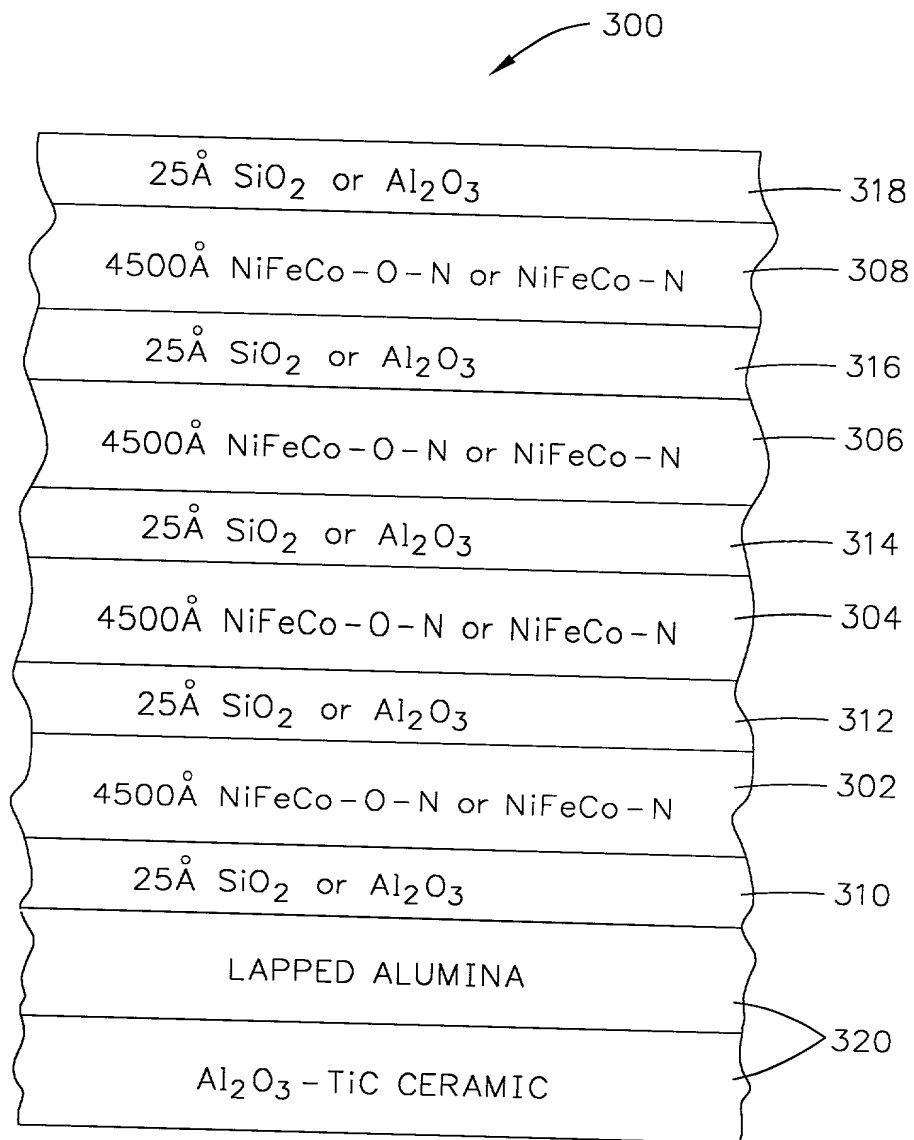
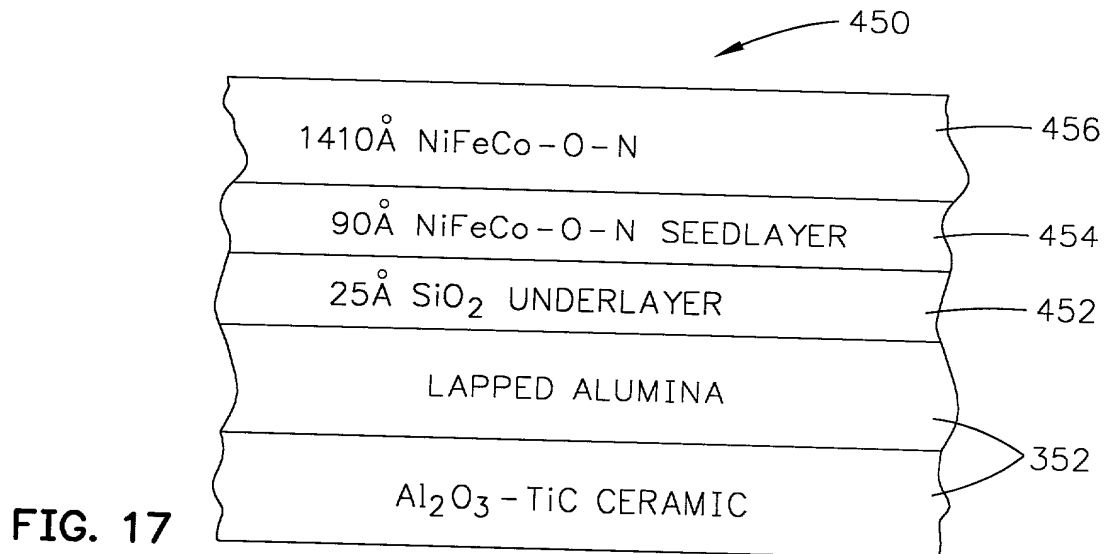
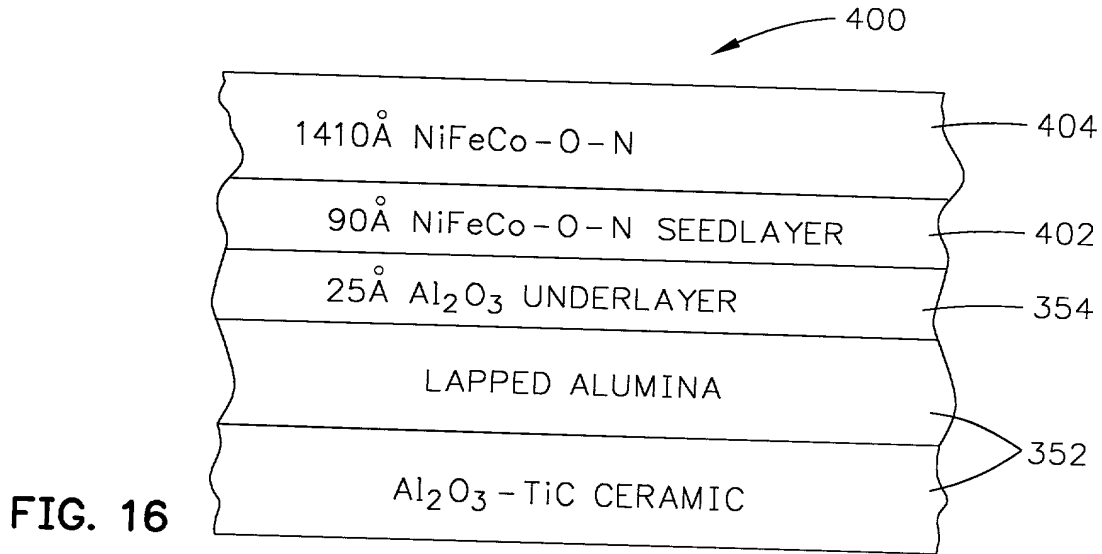
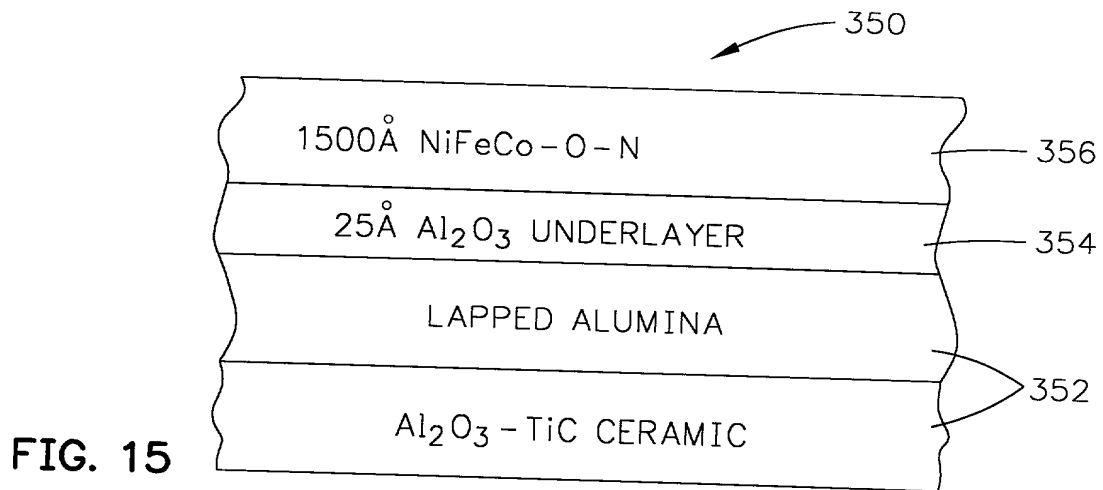
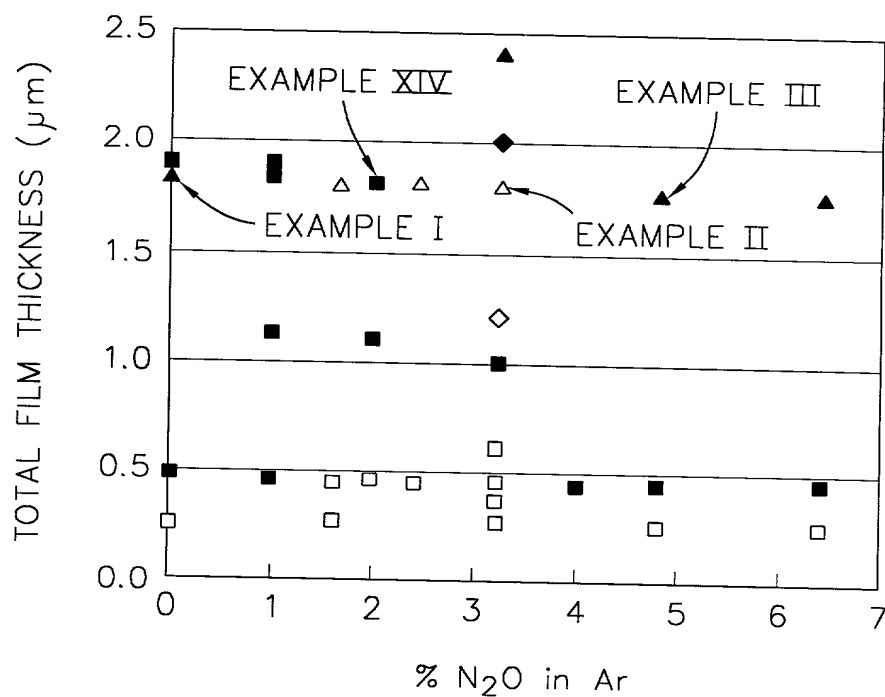


FIG. 14





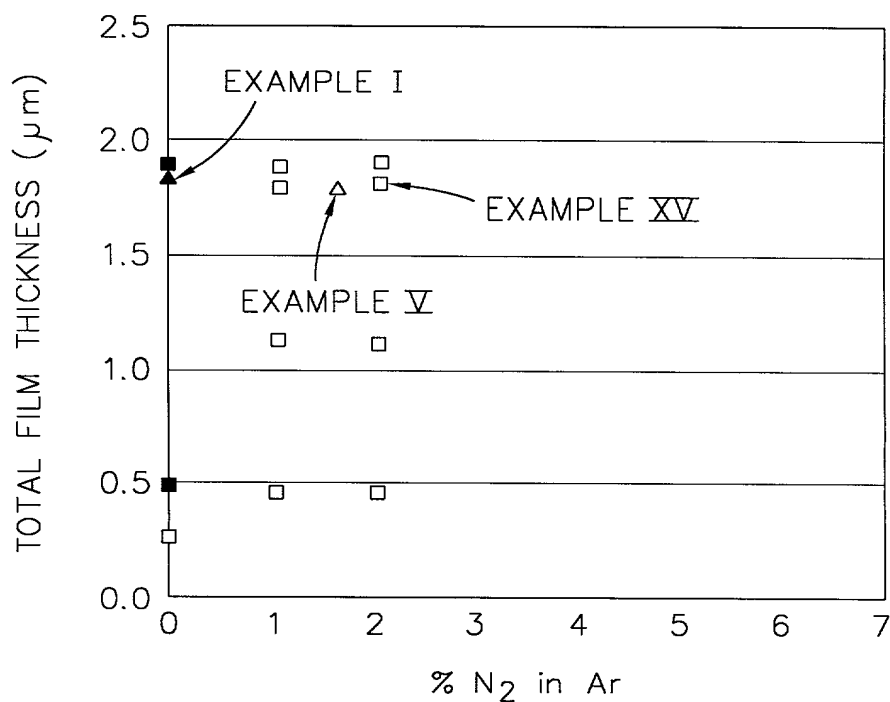
THICKNESS AND N<sub>2</sub>O CONCENTRATION  
DEPENDENCE OF IN-PLANE AND VERTICAL H<sub>k</sub> IN  
SINGLE LAYER AND LAMINATED NiFeCo-O-N FILMS  
(DC MAG 1750 W, 2.0X10<sup>-3</sup> mbar, NO BIAS)



- SINGLE LAYER FILMS-IN PLANE H<sub>k</sub>
- ◇ 2X LAMINATED FILMS-IN PLANE H<sub>k</sub>
- △ 4X LAMINATED FILMS-IN PLANE H<sub>k</sub>
- SINGLE LAYER FILMS- VERTICAL H<sub>k</sub>
- ◆ 2X LAMINATED FILMS- VERTICAL H<sub>k</sub>
- ▲ 4X LAMINATED FILMS- VERTICAL H<sub>k</sub>

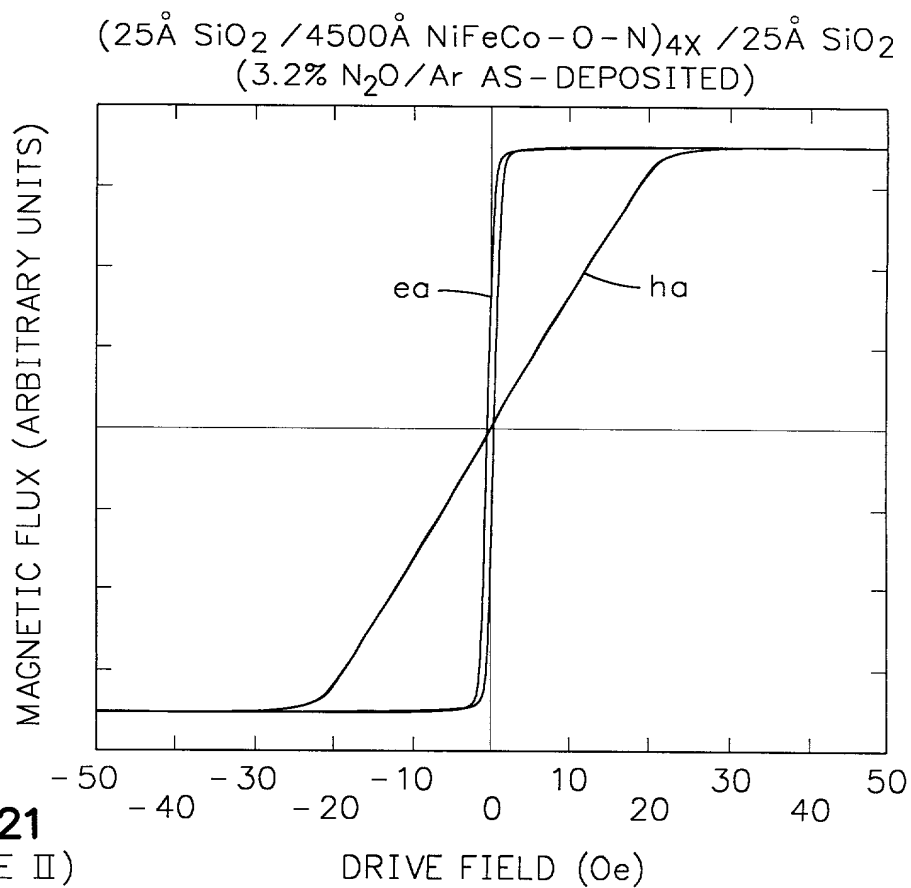
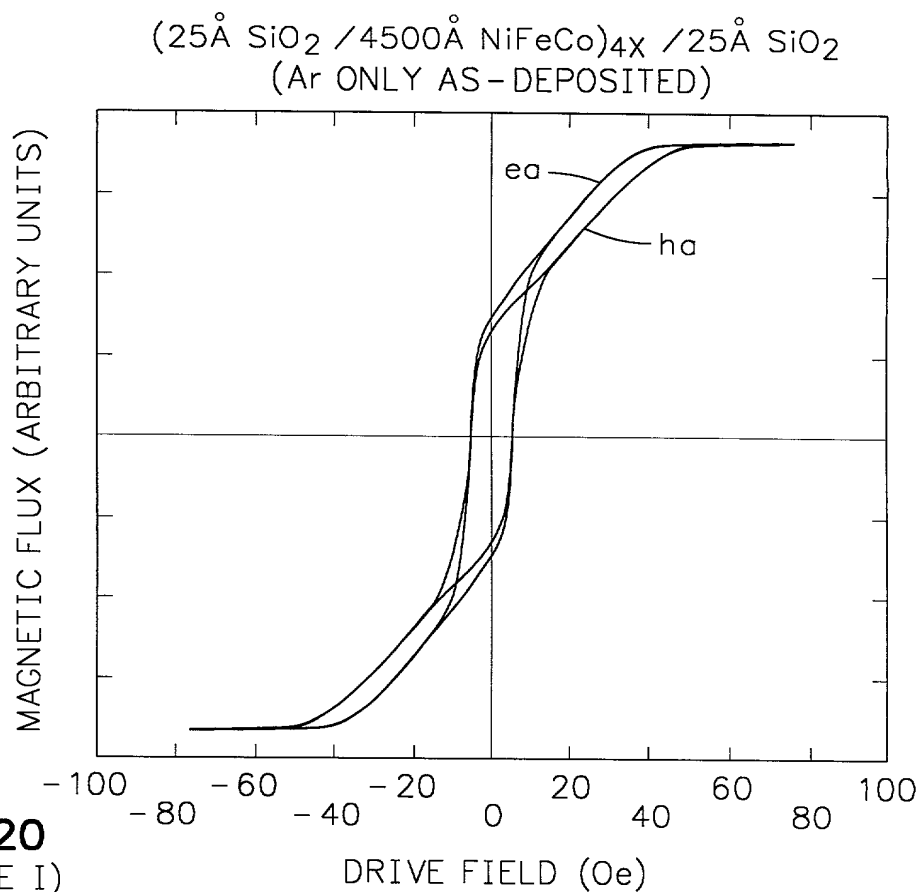
FIG. 18

THICKNESS AND N<sub>2</sub> CONCENTRATION  
DEPENDENCE OF IN-PLANE AND VERTICAL H<sub>k</sub> IN  
SINGLE LAYER AND LAMINATED NiFeCo-N FILMS  
(DC MAG 1750 W, 2.0X10<sup>-3</sup> mbar, NO BIAS)

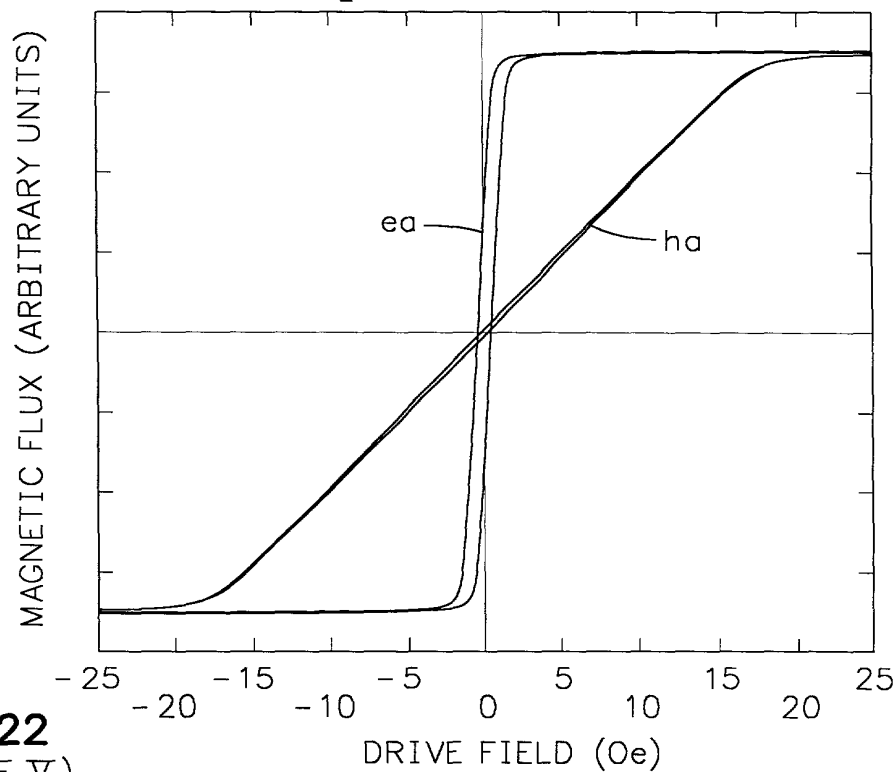


- SINGLE LAYER FILMS - IN PLANE H<sub>k</sub>
- △ 4X LAMINATED FILMS - IN PLANE H<sub>k</sub>
- SINGLE LAYER FILMS - VERTICAL H<sub>k</sub>
- ▲ 4X LAMINATED FILMS - VERTICAL H<sub>k</sub>

FIG. 19

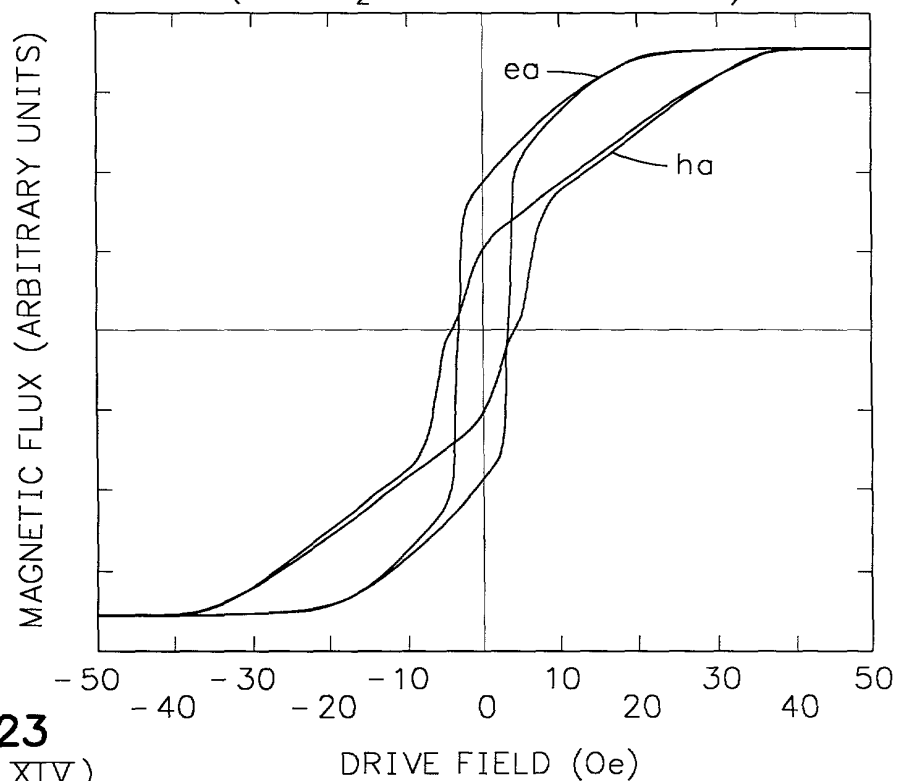


(18Å ALUMINA/4500Å NiFeCo-N)<sub>4</sub>X /25Å ALUMINA  
(1.6% N<sub>2</sub> /Ar AS-DEPOSITED)



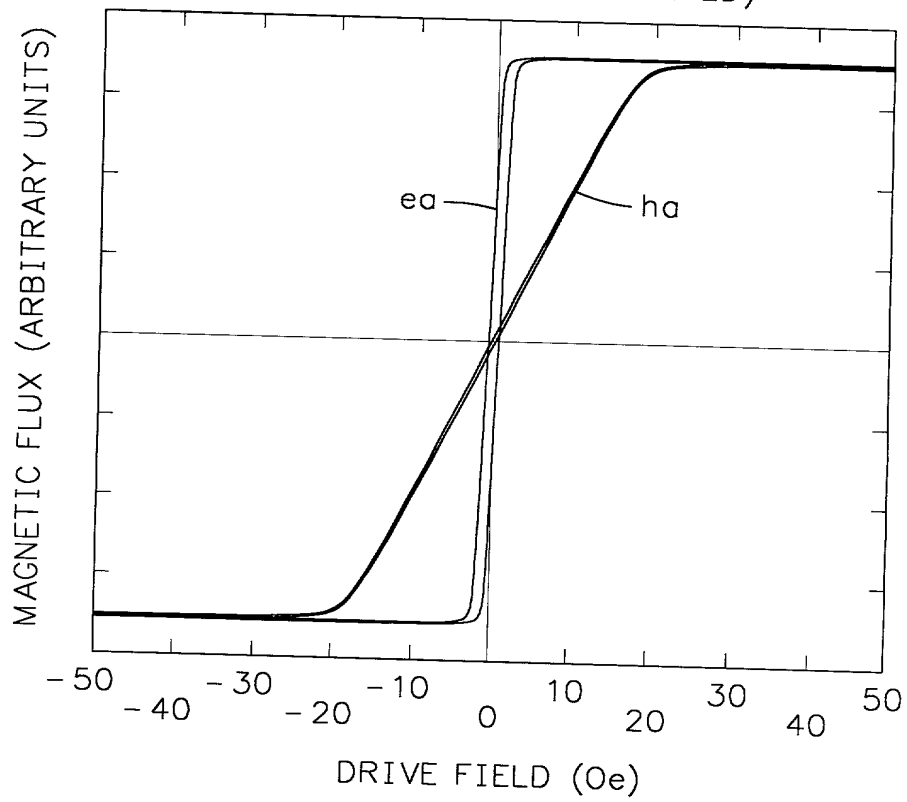
**FIG. 22**  
(EXAMPLE V)

25Å ALUMINA/1.80 μm NiFeCo-O-N/25Å ALUMINA  
(2.0% N<sub>2</sub>O/Ar AS-DEPOSITED)

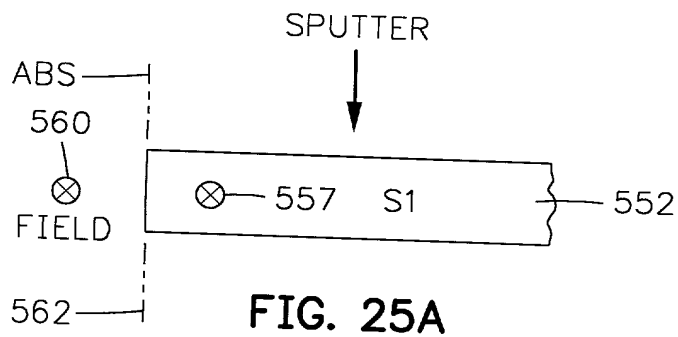


**FIG. 23**  
(EXAMPLE XIV)

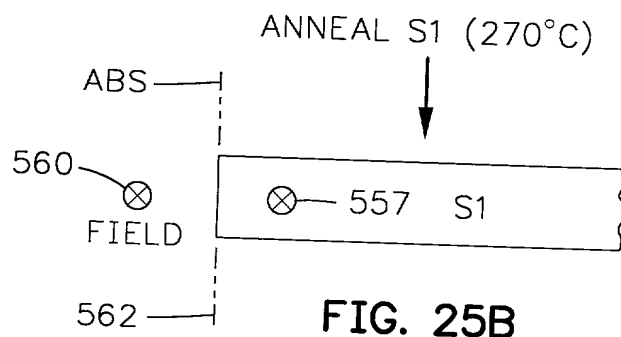
25Å ALUMINA/1.80 μm NiFeCo-N/25Å ALUMINA  
(2.0% N<sub>2</sub>/Ar AS-DEPOSITED)



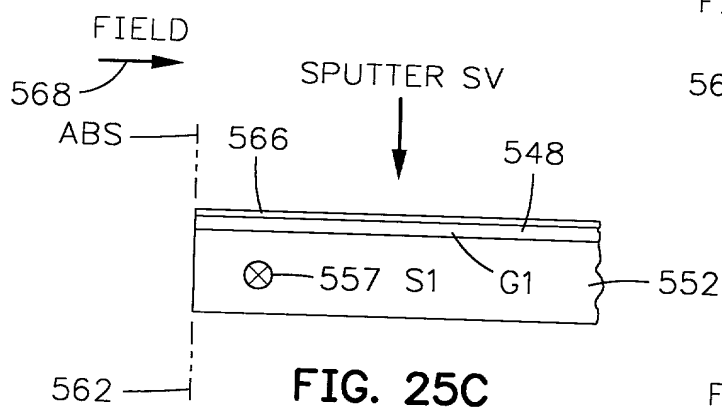
**FIG. 24**  
(EXAMPLE XV)



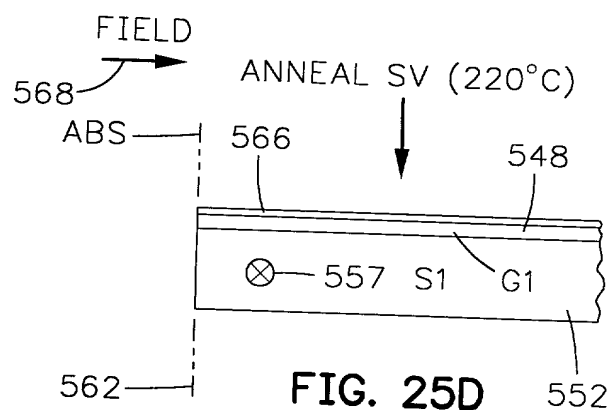
**FIG. 25A**



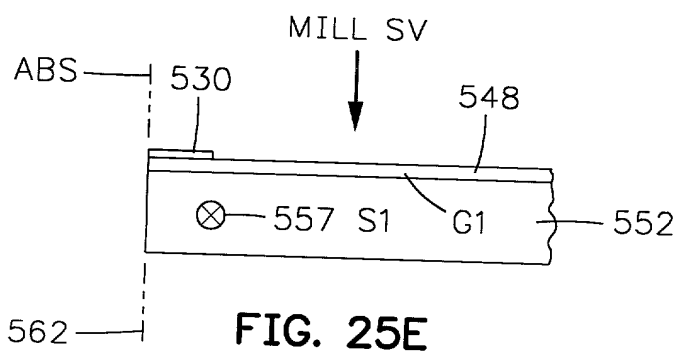
**FIG. 25B**



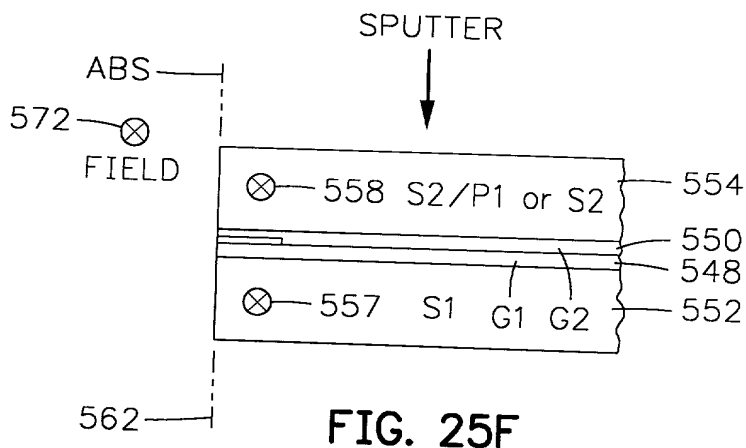
**FIG. 25C**



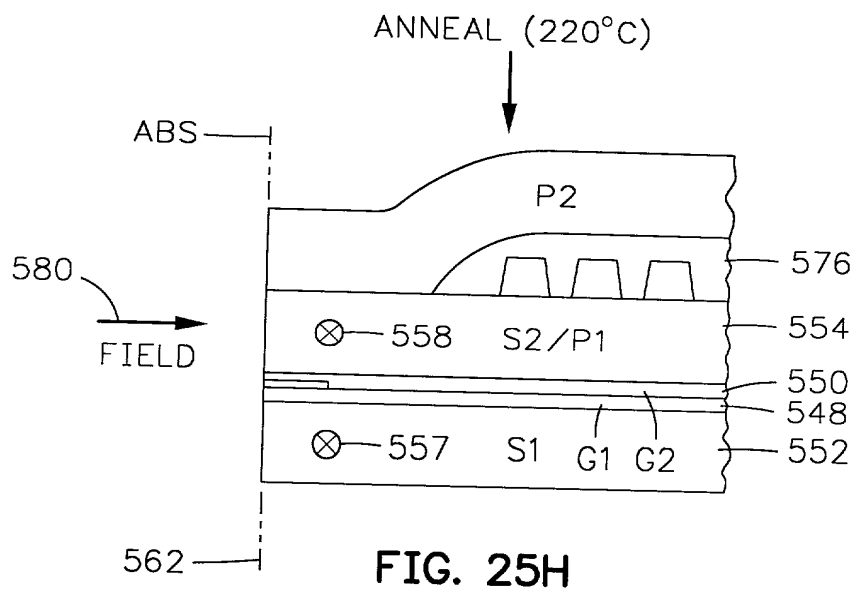
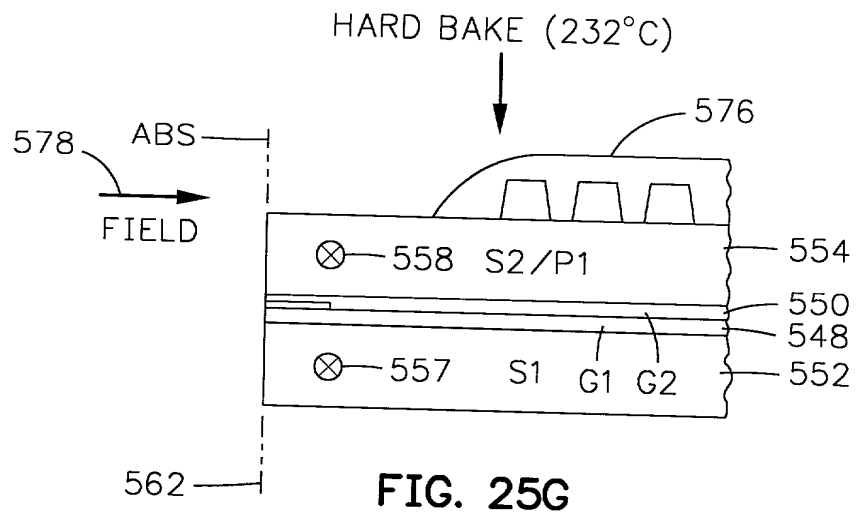
**FIG. 25D**



**FIG. 25E**



**FIG. 25F**



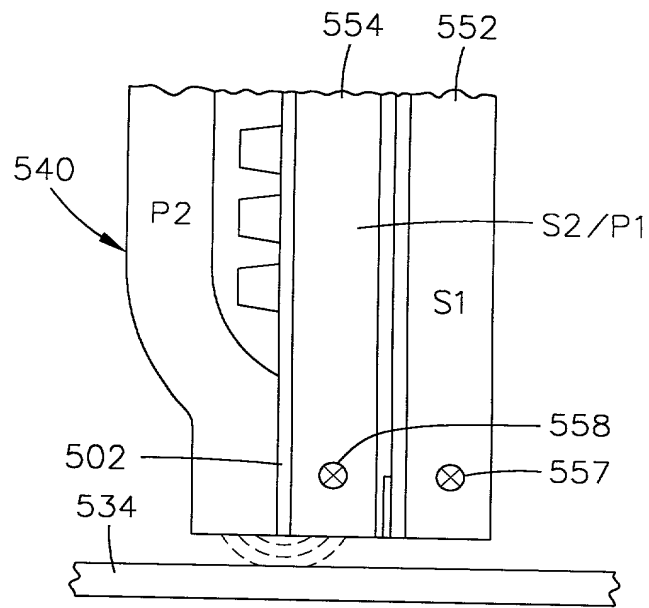


FIG. 26

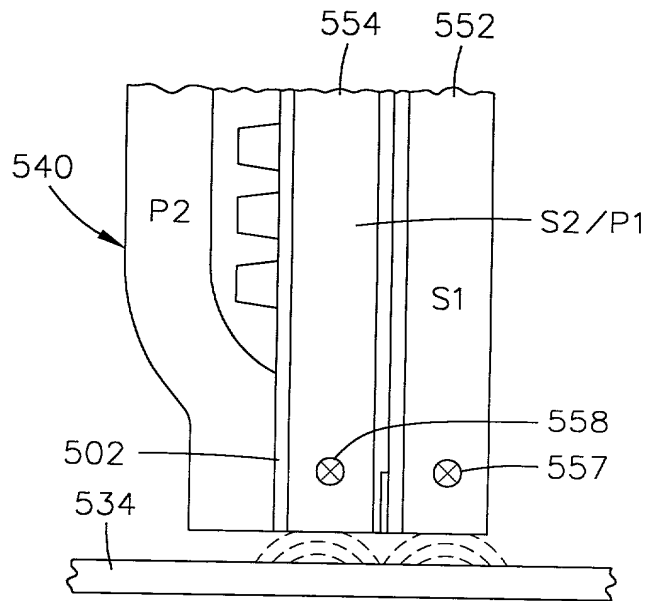
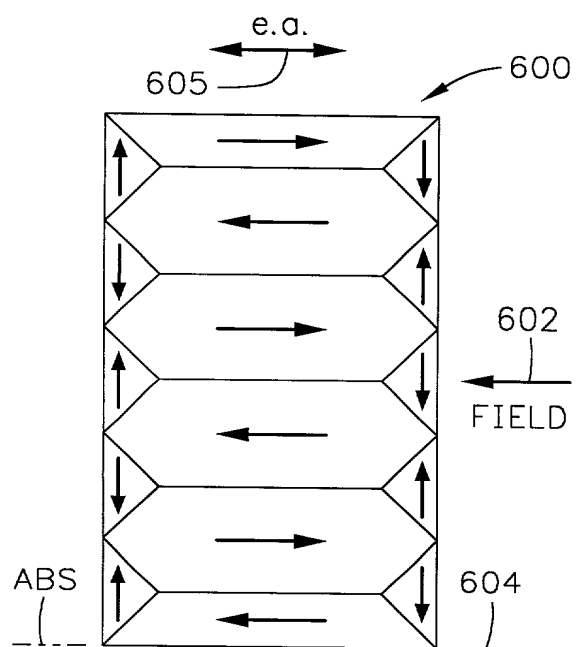
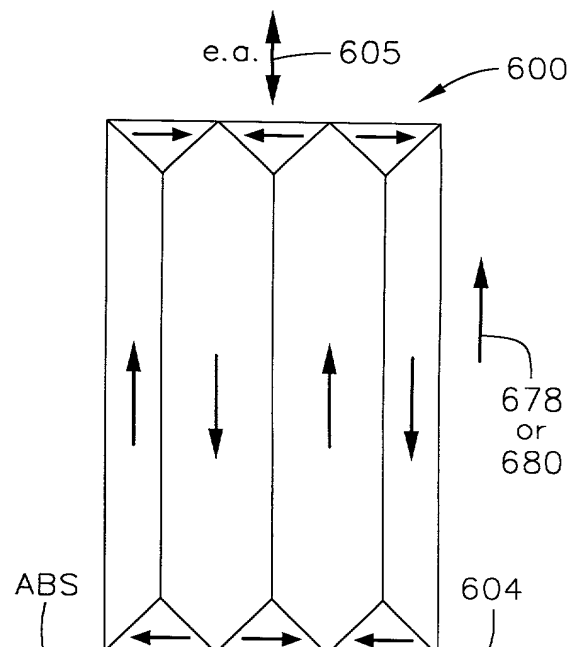


FIG. 27

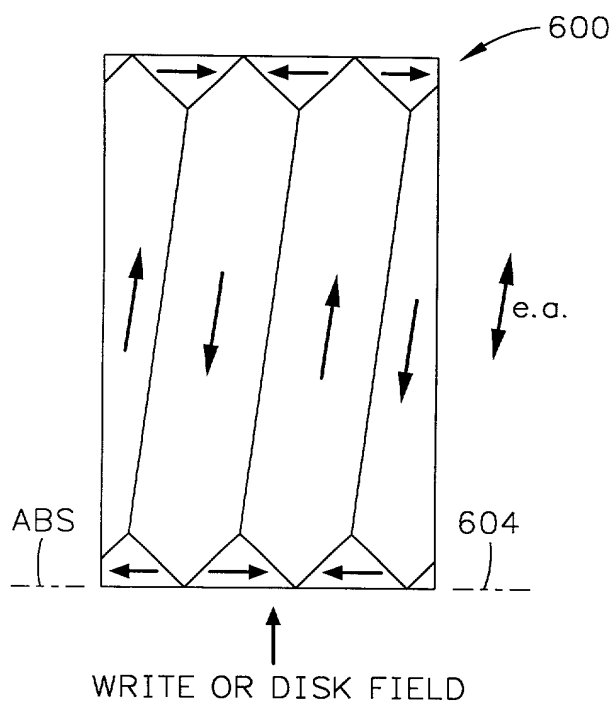




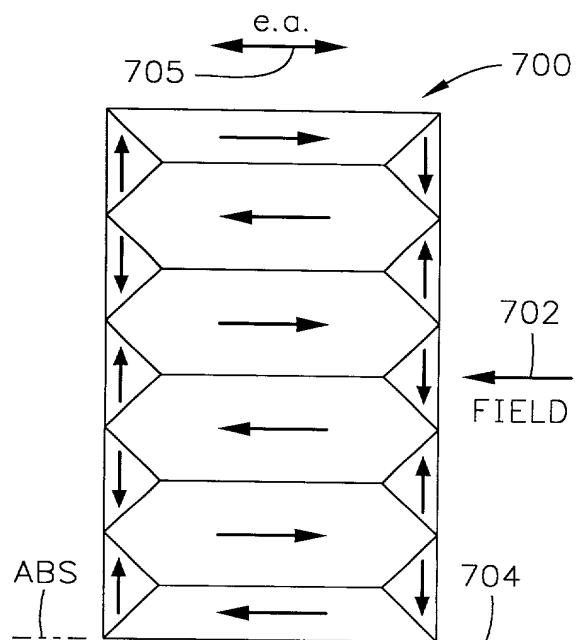
**FIG. 28A**  
(PRIOR ART)



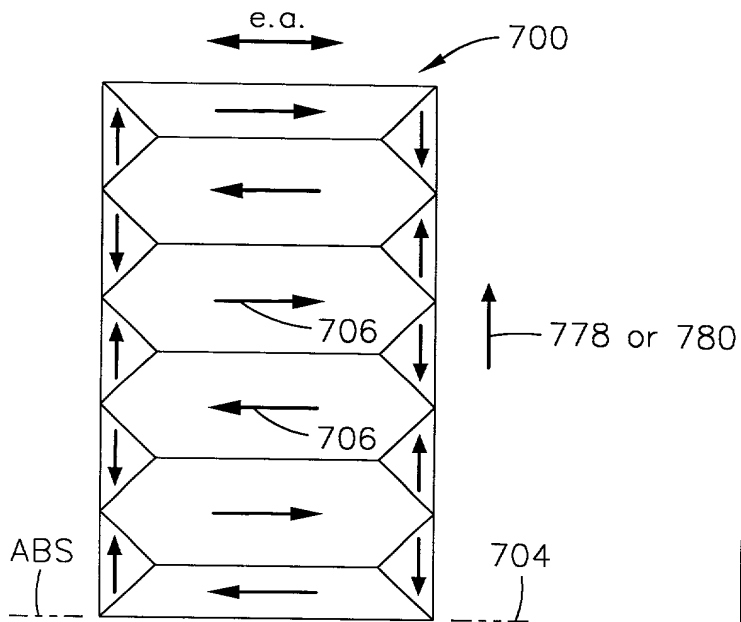
**FIG. 28B**  
(PRIOR ART)



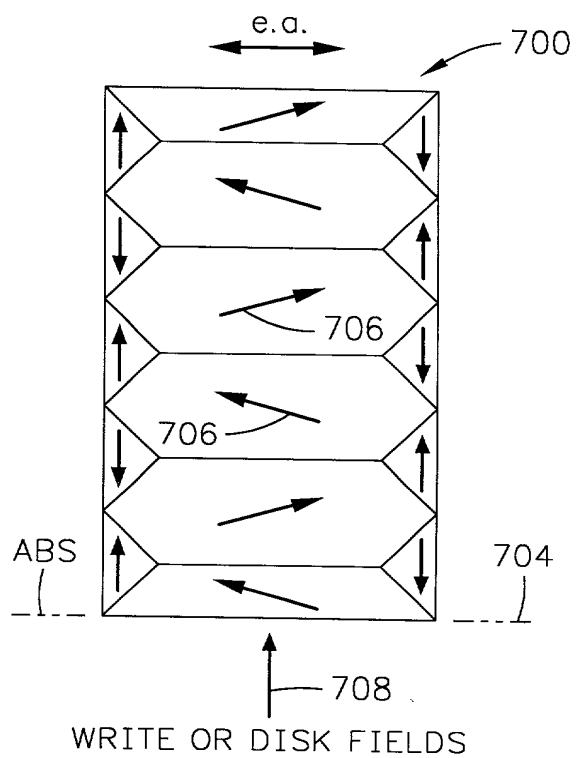
**FIG. 28C**  
(PRIOR ART)



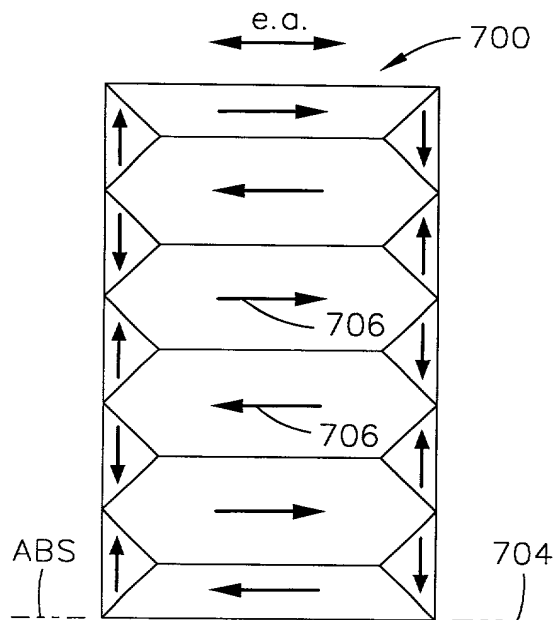
**FIG. 29A**



**FIG. 29B**  
 NiFeCo[ - O ] - N AFTER HARDBAKE  
 ANNEALING OR RESETTNG  
 IN THE PRESENCE OF A FIELD  
 PERPENDICULAR TO THE ABS



**FIG. 29C**



**FIG. 29D**